

Working with Oak Ridge National Laboratory

by

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OAK RIDGE NATIONAL LABORATORY
U. S. DEPARTMENT OF ENERGY

ORNL shares business-relevant assets

- Technology
- Knowledge
- Facilities
- Capabilities



Doing Business with ORNL offers

- Access to world-class research
- Innovative solutions to complex problems
- Access to user facilities
- Licensing and partnering opportunities
- Technical assistance to small businesses
- Start-up business support



ORNL offers access to innovative solutions:

- Superior heat transfer using graphite foam
- Treatment of alloys to improve hip-joint replacements
- Portable analyzers to rapidly measure blood components
- Sophisticated instruments for use in space
- Energy efficient heat pumps, water heaters, and residential and commercial appliances

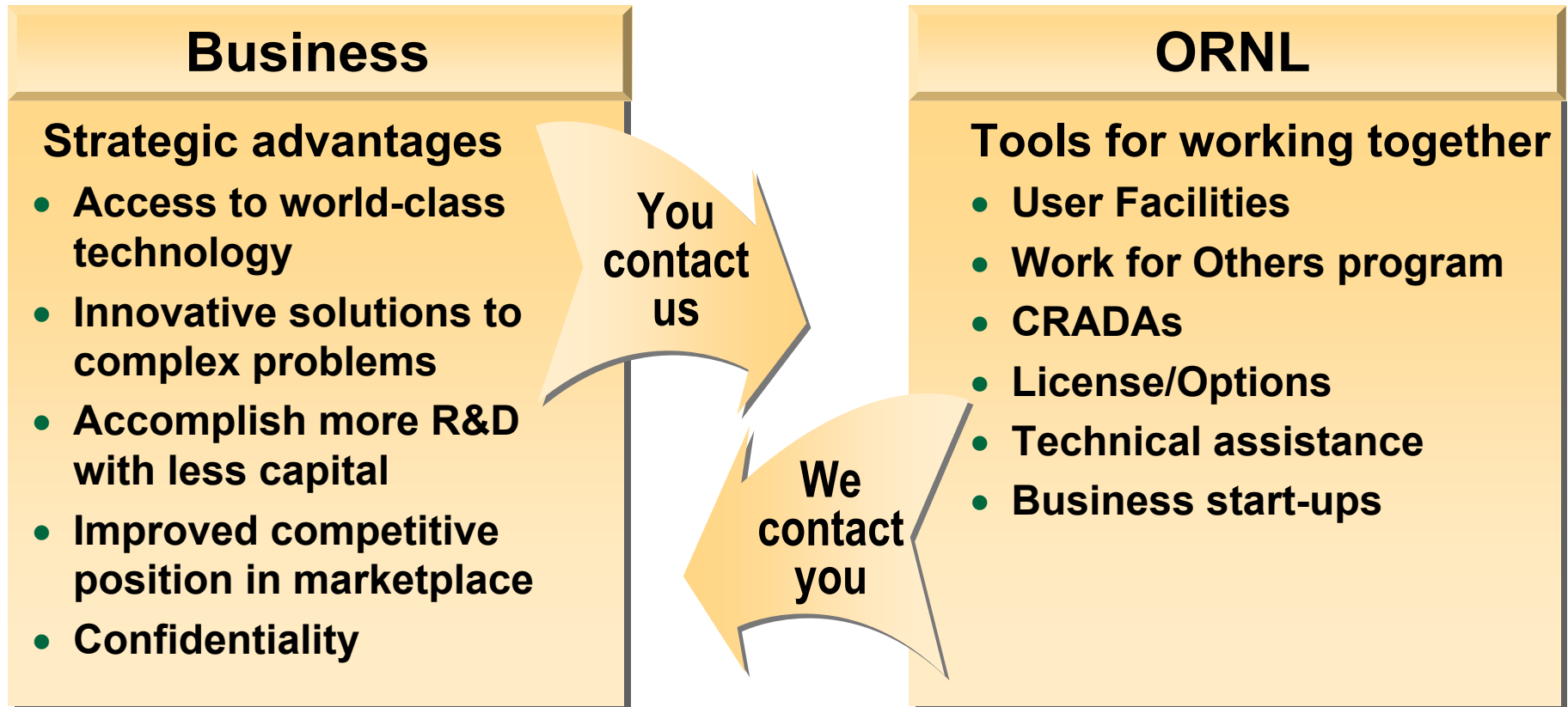


ORNL offers access to innovative solutions: *(continued)*

- Isotopes for treating cancer, arthritis, and other medical conditions
- Microwave processing technology to eliminate hot and cold spots in ovens
- Lab-on-a-chip for medical diagnosis while you wait
- Weigh-in-motion sensors used for trucks to reduce congestion at weigh stations



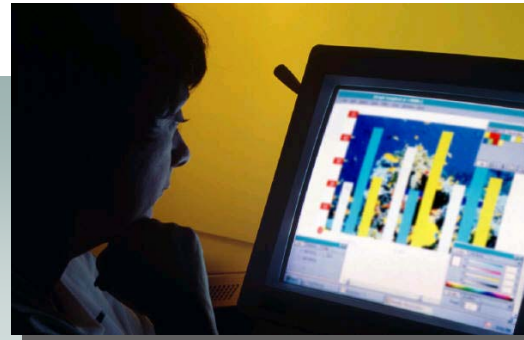
Collaborating with ORNL: How does it begin?



Critical success factors for tech transfer

Understanding Customer Requirements

- Product specs
- Market drivers
- Constraints



Technology

- Matching products to usage needs
- Matching business needs to existing technologies



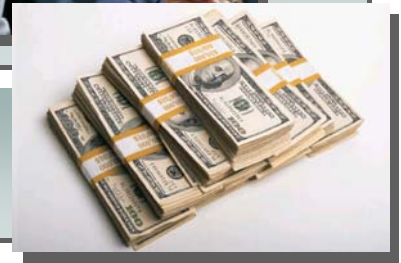
People

- Dedicated tech transfer team in each directorate
- Experts in all aspects of business success



Capital

- Access to funding sources



Partnering opportunities

Cooperative Research and Development Agreements

Through CRADAs, ORNL can work with businesses to move promising technologies toward commercialization



Work for Others Agreements

Industry can contract directly for R&D that draws on ORNL's unique facilities and expertise



Technical Assistance

ORNL researchers can provide short-term assistance to help businesses solve specific technical problems

Partnering opportunities

(continued)

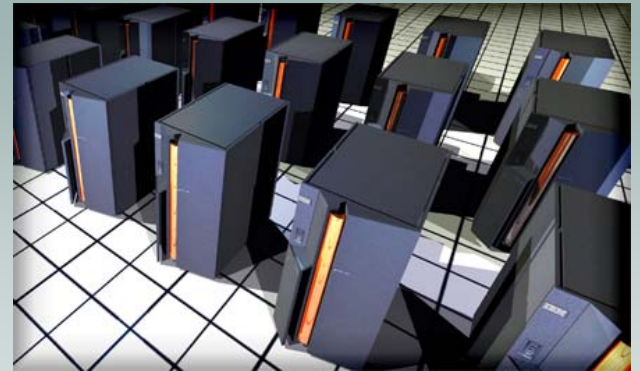
Licensing

Intellectual property resulting from ORNL research is available for licensing



User Facilities

Sophisticated research facilities at ORNL are available to researchers from industry, academia, and other national laboratories



Transportation Technologies

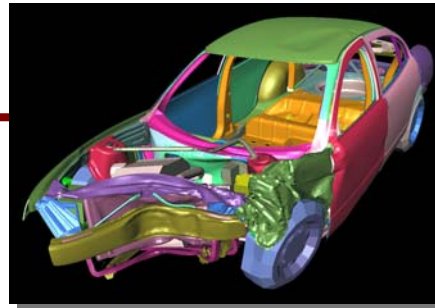
**Advanced Propulsion
Technology Center**



**High Temperature
Materials Laboratory**



**National Transportation
Research Laboratory**



**Power Electronics and Electric
Machinery Research Center**

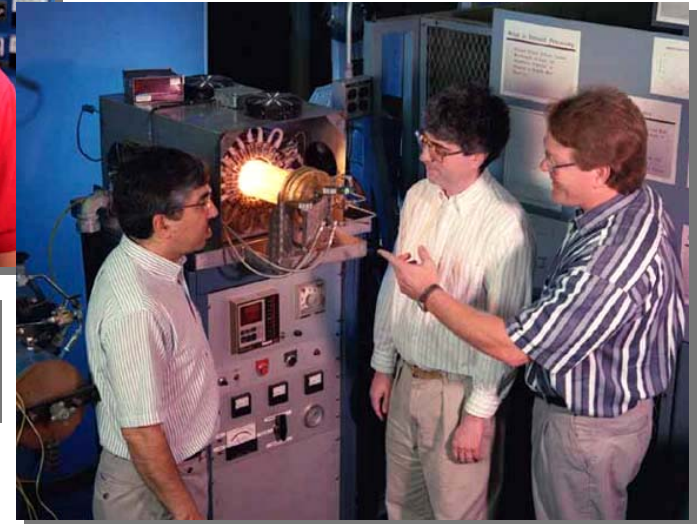


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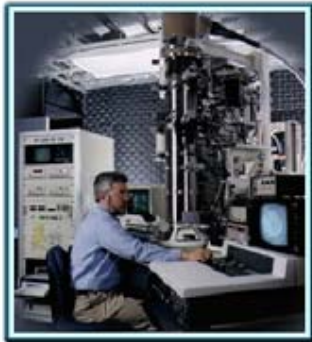
Industrial Technologies

Materials Processing Laboratory User Center



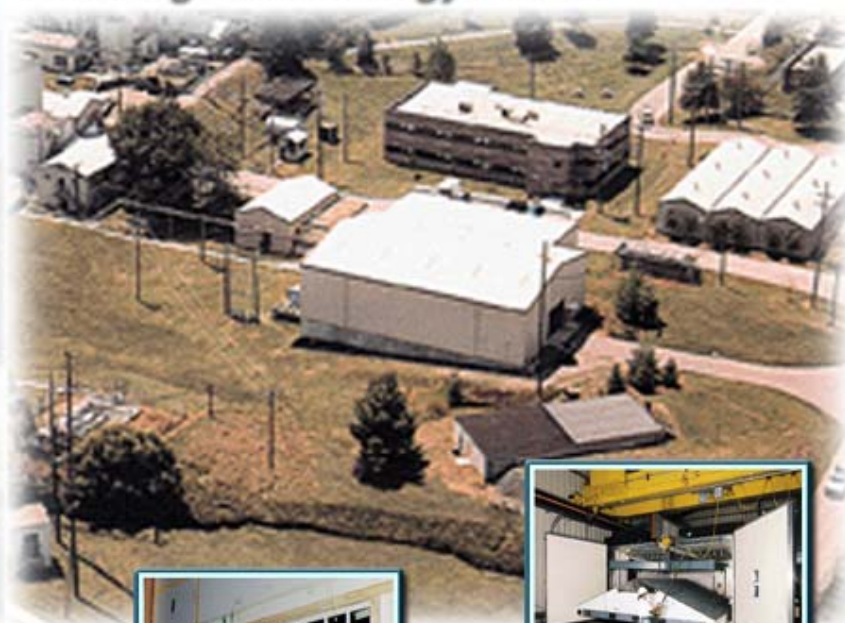
User Facilities

High Temperature Materials Laboratory



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Buildings Technology Center



Industry partnerships are important

- **Innovations**
 - 70 invention disclosures made
 - 78 patents issued
- **Technology licenses**
 - 44 licenses executed
 - 14 new companies established
 - \$28M in sales of licensed technology
- **CRADAs**
 - 31 new CRADAs executed
 - \$50M to ORNL
- **User facilities**
 - Two new user facilities
 - 48 new user agreements
 - 117 new projects initiated
- **Business assistance**
 - 28 client companies assisted by the Center for Entrepreneurial Growth
 - 25 businesses provided with technical assistance by ORNL staff
- **Work for non-federal customers**
 - Funding of more than \$20M

